Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ TP: \_\_\_\_\_\_\_

HW#36H: Distance Formula

Honors Geometry

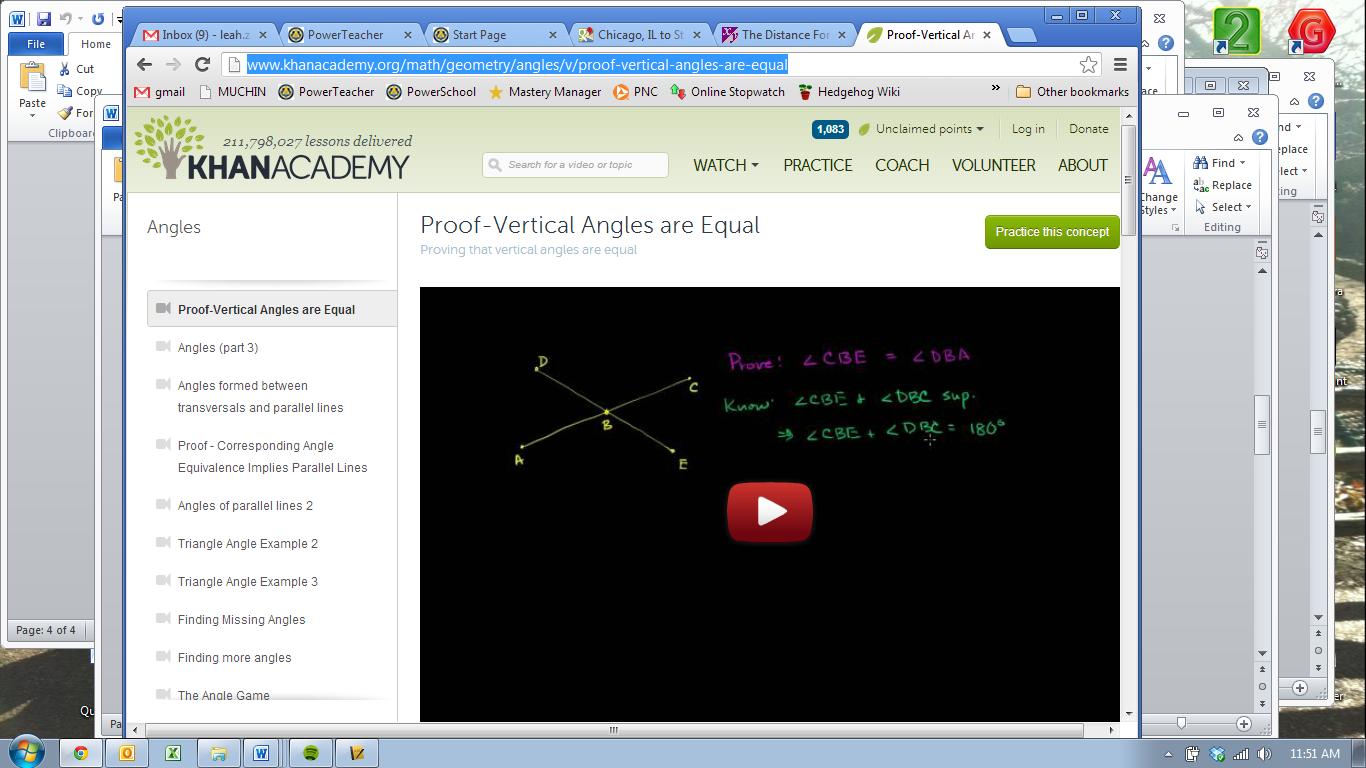
Due Date: Friday, November 21st

***Failure to show all work and write in complete sentences will result in LaSalle!***

|  |  |
| --- | --- |
| 1) In the figure below, points A, B, C, and D form a square. What is the area of the figure in square units?     1. 8 2. 16 3. 17 4. 31 | 2) A town planner designs a town based on the standard (x,y) plane. How long is a street that runs from coordinate (5,18) to coordinate (21,6)?   1. 72 2. 20 |
| 3) Find all points (4, *y*) that are 10 units from the point (–2, –1). | |
|  | ***Hint:*** Try drawing (–2, –1) and then drawing a circle with radius 10 around this. Then draw the vertical line through *x* = 4. |

Watch the Kahn Academy video: **Proof – Vertical Angles are Equal**

**<http://www.khanacademy.org/math/geometry/angles/v/proof-vertical-angles-are-equal>**



**4. Write a two column proof (you can prove without seeing the video)**

**Given: ** and are supplementary

**** and are supplementary

**Prove: **

|  |  |
| --- | --- |
| 5) Find the value of ‘Y’ in the picture below.     1. 42 2. 32 3. 40 4. 50 | 6) In the Pythagorean triple (*a,b,c*), what is special about the value of *c*?  **A.** It is always even.  **B.** It is always the largest of the three.  **C.** It is always the smallest of the three.   1. It is always odd. |
| 7) In the Pythagorean triple (*a,b,c*), what is special about the values of *a* and *b*?  **A.** They are the two long sides of a right triangle.  **B.** They are always equal to each other.  **C.** They are the two short sides of a right triangle.  **D.** *a* is always bigger than *b*. | 8) Which of the following triples is a Pythagorean triple?  **A.** (5, 12, 17)  **B.** (4, 5, 6)  **C.** (9, 40, 41)  **D.** (8, 10 18) |
| 9) Which of the following triangles is correctly labeled?  A.  B.  C. D. None are labeled correctly | |